IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

LEVITON MANUFACTURING CO., INC.,

Plaintiff,

vs.

No. CIV 04-0424 JB/LFG

NICOR, INC., d/b/a NICOR LIGHTING & FANS,

Defendant,

and

ZHEJIANG DONGZHENG ELECTRICAL CO.,

Defendant/Intervenor.

and

LEVITON MANUFACTURING CO., INC.,

Plaintiff,

vs.

No. CIV 04-1295 JB/ACT

HARBOR FREIGHT TOOLS USA, INC.,

Defendant.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court on: (i) Plaintiff Leviton Manufacturing Co., Inc.'s Joint Claim Construction Statement, filed February 7, 2005 (Doc. 96); (ii) Leviton's Notice of Errata and of Substitution, filed February 8, 2005 (Doc. 98); and (iii) the Defendants' Joint Claim Construction Statement, filed February 18, 2005 (Doc. 106). The Court held a Markman hearing on

220

March 29, 2005. The primary issues are whether the Court should construe various terms in Claim 3 as means-plus-function claim terms in accordance with 35 U.S.C. § 112, ¶ 6, and if so, what are the structural limitations of the claim terms. The Court concludes the following: (i) the term "circuit interrupting device" refers to a device designed to interrupt or break the flow of current in a single circuit; (ii) the terms "first electrical conductive path means," "second electrical conductive path means," "third electrical conductive path means," and "circuit interrupting means" are not subject to 35 U.S.C. § 112, ¶ 6; (iii) the function of "reset means" is to reestablish electrical continuity between the first and second conductive path means and between the first and third conductive path means; (iv) the structures comprising "reset contact means" are latch member 100, latching finger 102, movable contact arm 50, and reset contacts 104 and 106; and (v) the structures comprising "reset means" are reset button 30; return spring 120; latch member 100; latching finger 102; movable contact arms 50, 70; reset contacts 104, 106, 52, 62, 56, 66, 72, 82, 76, and 86; coil assembly 90, plunger 92, banger 94, banger dogs 96 and 98; operable ends 116 and 118; and a circuit that senses the "predetermined condition" and causes coil assembly 90 to actuate plunger 92.

FACTUAL AND TECHNOLOGICAL BACKGROUND

Leviton is the owner of U.S. Patent No. 6,246,558 ("'558 Patent"), entitled "Circuit Interrupting Device with Reverse Wiring Protection." Leviton brought suit against Defendants Nicor, Inc., Zhejiang Dongzheng Electrical Co., and Harbor Freight Tools USA, Inc., alleging infringement of Claim 3 of the '558 Patent by making, using, offering to sell, or selling ground fault circuit interrupting devices ("GFCI devices") that embody the patented invention. Claim 3 of the '558 Patent (the "Asserted Claim") is directed to a family of resettable circuit interrupting devices and systems that includes, among others, GFCI devices. Claim 3 of the patent provides reverse

wiring protection in such devices. The following background information is necessary to understand the legal issues surrounding the Asserted Claim.

A. GROUND FAULT CIRCUIT INTERRUPTION DEVICES.

GFCI devices, which have been produced for over 20 years, are designed to provide protection against electrocution in residential and/or commercial settings. In residential settings, GFCI devices are commonly installed in kitchens, bathrooms, and pool areas. A GFCI device, in essence, is a switch that automatically interrupts or breaks an electrical circuit when the device detects the occurrence of a ground fault. Ordinarily, electricity follows a complete circuit, from the power source, to the outlet, cord, and electrical appliance and back again. Under normal circumstances, an equal amount of current goes into and out of the appliance. A ground fault occurs when the electric current flowing into an electrical device leaves its intended path -- for example, when a person inserts a fork into a toaster and touches the metal of the toaster such that the current is drawn from the toaster, into the person, and into the ground. Since part of the current has followed the alternate path through the person, a current imbalance occurs because the current flowing out of the outlet does not equal the current flowing into the outlet. A GFCI device senses the current imbalance when a ground fault occurs and opens an internal switch, which interrupts the circuit and prevents electricity from flowing to and through the person.

A common GFCI device is a GFCI receptacle which has the external appearance of a two-hole or three-hole electrical alternating current ("AC") outlet. The GFCI receptacle has a housing, and on the housing's face, there are typically two two-hole or two three-hole outlets. Each hole of the outlet is referred to as a user accessible terminal. Thus, a two-hole outlet has at least two user accessible terminals: one terminal referred to as the phase terminal and the other terminal referred

to as the neutral terminal. Three-hole outlets have a third user accessible terminal, known as a ground terminal.

Many electrical devices, such as household appliances, have an electrical cord at the end of which is a two-prong or three-prong plug, which is inserted into the two- or three-hole outlets. The electrical cord has a phase wire, a neutral wire, and, for three-prong plugs, a ground shield wrapped around the phase and neutral wires. The phase wire corresponds with the phase terminal, the neutral wire with the neutral terminal, and the ground wire with the ground terminal. When an electrical appliance is plugged into a functioning GFCI receptacle, the appliance receives electrical current from the GFCI receptacle via the electrical cord. Current flows from the phase terminal through the phase wire of the cord to the electrical device and returns via the neutral wire to the neutral terminal.

A GFCI receptacle also has line and load terminals, which are located on the backside of the receptacle. A GFCI device receives power at its line terminals. In a residence, the power source is usually a service panel typically located in the basement or garage of a home where electrical power lines from a power utility company are connected. Phase and neutral wires from the power source are connected to the line phase and line neutral terminals, respectively, of the GFCI receptacle. The GFCI receptacle also has load terminals, load phase and load neutral, which are connected to the line terminals of the GFCI receptacle. Under normal operating conditions, a switch inside the GFCI device provides a conductive path that connects the line terminals to the load terminals. In GFCI devices before the present invention, the load terminals and user accessible terminals were integral to each other, *i.e.*, connected to each other, as the load phase and load neutral terminals extended to provide the user accessible terminals. Because of this integration, when the GFCI device was tripped, the load and user accessible terminals were disconnected from the line terminals and the

power source, thus protecting a person from a ground fault.

Generally, load terminals are also connected to line terminals in downstream AC outlets in daisy chain fashion and/or connected to electrical devices such as ceiling fans and light fixtures. The downstream outlets receive their power through the first GFCI device. Thus, if the GFCI device trips in response to a ground fault, then the GFCI device will prevent electricity from flowing through any of the downstream outlets.

FIG. A below shows three AC outlets (A, B, and C) where the line terminals of outlet A are connected to a service panel/power source via line phase and line neutral wires. Outlet A is a GFCI receptacle and outlets B and C are unprotected AC outlets. Outlet B receives power from outlet A's load terminals and outlet C receives power from outlet B's load terminals.

For the GFCI receptacle, *i.e.*, outlet A, power from the line terminal is transferred to the three-hole socket and thus also to the load terminals when the GFCI receptacle is operating properly. Therefore, under proper operation, outlet B receives power from the load terminals of outlet A and outlet C receives power from the load terminals of outlet B.

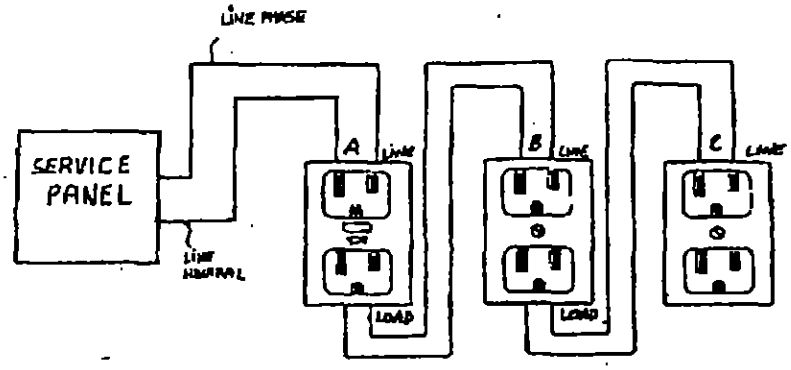


FIG. A

A closer view of a GFCI device, as appears in FIG. 1 of the '558 patent, is shown below.

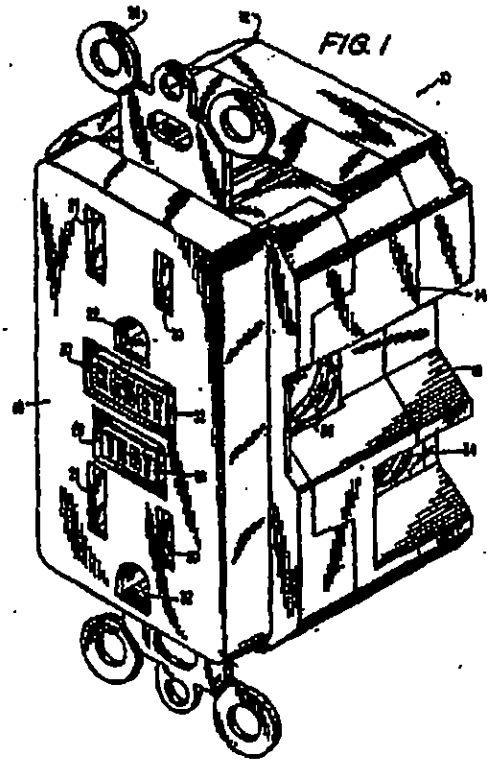


FIG. 1 of the '558 Patent shows a GFCI receptacle 10 that has a housing 12. Housing 12 has a central body 14 to which a face or cover portion 16 and rear portion 18 are secured. The face portion 16 has outlet sockets 20, 21, and 22 (the user accessible terminals) for receiving a three-prong plug. Outlet 22 is typically the opening for the ground prong. The face 16 also has a test button 26 extending through opening 28 and a reset button 30 extending through opening 32. When the test button is depressed, the device breaks the electrical continuity between the line and load terminals. In contrast, pressing the reset button reestablishes electrical continuity between the line and load terminals. FIG. 1 only shows one side of the GFCI receptacle depicting the location of binding screws 34 and 36. Screw 34 is a line phase terminal, and screw 36 is a load phase terminal. Screw 38, which is not viewable in FIG. 1, is located opposite of screw 34 and is the line neutral

terminal. Similarly, screw 40, which is not viewable in FIG. 1, is located opposite of screw 36 and is the load neutral terminal.

B. THE REVERSE WIRING PROBLEM.

The protection against electrocution afforded by conventional GFCI devices evaporates, however, when GFCI devices are incorrectly wired. A properly wired GFCI device has its line terminals connected to the power source and its load terminals connected to an outlet or electrical device such as a light fixture. In this proper configuration, the GFCI device provides protection against a ground fault for all outlets and devices connected to it. Electricians and consumers, however, commonly and mistakenly connect the phase and neutral wires from the power source to the load terminals, instead of the line terminals. This incorrect configuration is known as "reverse wiring." The problem with reverse wiring is that the load terminals, and thus the integrated user accessible terminals, are directly connected to the power source, and the internal switch that opens in response to a ground fault is no longer in between the power source and the user accessible terminal. Therefore, when a ground fault occurs and the internal switch opens, the connections are arranged in a way that still allows electricity to flow to the load terminal, user accessible terminal, appliance, and finally, to the person, failing to prevent electrocution.

Claim 3 solves the reverse wiring problem by separating the user accessible terminals from the load terminals so that they are no longer integrated or directly connected. This new design creates a separate conductive path for the load terminals and the user accessible terminals. Each separate path has its own separate and independent set of internal switches so that they are electrically isolated from each other when the GFCI device is tripped. Consequently, now when a ground fault occurs, tripping the independent, internal switches, the electric current cannot reach

either the load terminal or the user accessible terminal, and thus, no electricity can get to the appliance or the person.

C. THE '558 PATENT.

The following facts are taken from the '558 Patent.

1. Preferred Embodiments.

The '558 Patent provides a detailed description of the preferred embodiments of the invention as well as 21 figures that depict various aspects of two preferred embodiments. Figures 1-12 depict one embodiment of the invention that includes a circuit interrupting portion, a reset portion, and a reset lockout, while Figures 13-20 depict an alternative embodiment that has a circuit interrupting portion, a reset portion, a reset lockout, and an independent trip portion. The embodiment depicted in Figures 1-12 appears to be the only embodiment at issue here.

FIG. 3, as shown below, depicts the first embodiment of the invention in an exploded view.

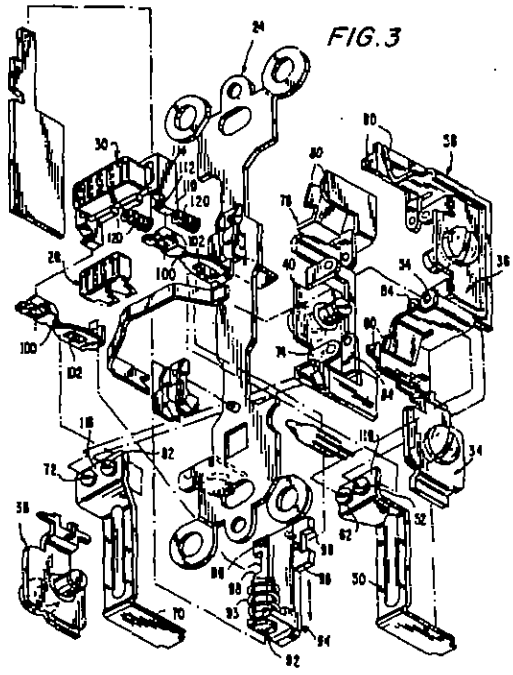
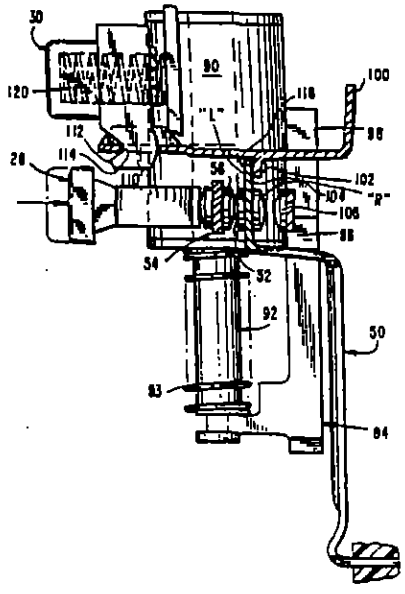


FIG. 2, also shown below, shows a side view, partly in section, of a portion of the invention shown in FIG. 3, which illustrates the GFCI device in a set or circuit *making* position. In FIG. 2, the movable contact arm 50 is in a stressed position so that movable contact 52 is in electrical connectivity with fixed contact 56 of contact arm 54.[1]

FIG. 2

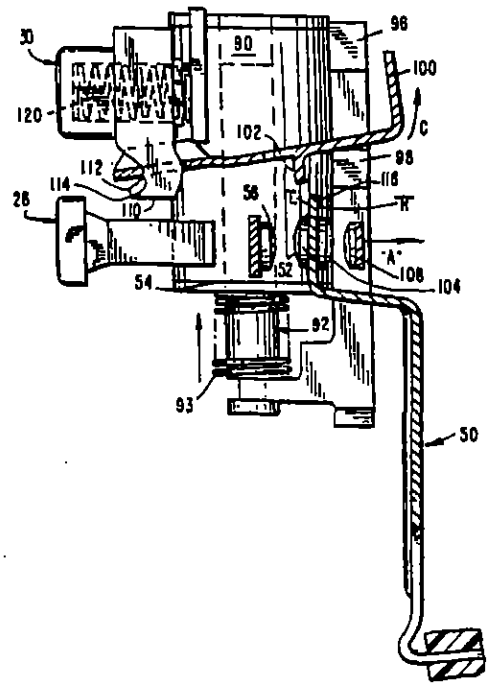


[1] A mirror image of this structure exists for the neutral portion of the GFCI device. For example, as shown in FIG. 3, movable contact arm 50's mirror image is movable contact arm 70. When movable contact arm 70 is in a stressed condition, movable contact 72 is in electrical connectivity with fixed contact 76 of contact arm 74. The Court will limit the following descriptions to the phase portion of the GFCI device, but the operation is similar for the neutral conductive path.

Furthermore, as to the phase portion, it appears that, when contacts 52 and 56 are in electrical connectivity, contacts 62 and 66 are as well. Similarly, when contacts 52 and 56 are not in electrical connectivity, neither are contacts 62 and 66. The same operation that causes contacts 52 and 56 to be in contact or not in contact appears to cause the same contact or lack thereof between contacts 62 and 66. Contacts 52 and 56 are part of the internal switch mechanism between the line phase and load phase conductive paths, while contacts 62 and 66 are part of the separate internal switch mechanism on the separate electrical pathway between the line phase and user accessible load phase conductive path. See '558 Patent, Col. 6, ll. 36-52.

If the sensing circuitry of the GFCI receptacle senses a ground fault, the coil assembly 90 is energized, causing plunger 92 to draw into the coil assembly 90. Banger 94, which is attached to plunger 92, moves upwardly as well, causing banger dog 98 to strike the latch member 100. Latch member 100, in turn, pivots in a counterclockwise direction causing latching finger 102 to disengage from the right side of the end 116 of movable contact arm 50. Latching finger 102 holds the end 116 of contact arm 50 in place, so when latching finger 102 disengages, it allows contact arm 50 to return to its pre-stressed condition, in which end 116 moves to the right. This movement causes movable contact 52 to separate from fixed contact 56, breaking electrical connectivity. FIG. 7, below, illustrates the GFCI device in this circuit *breaking* position.

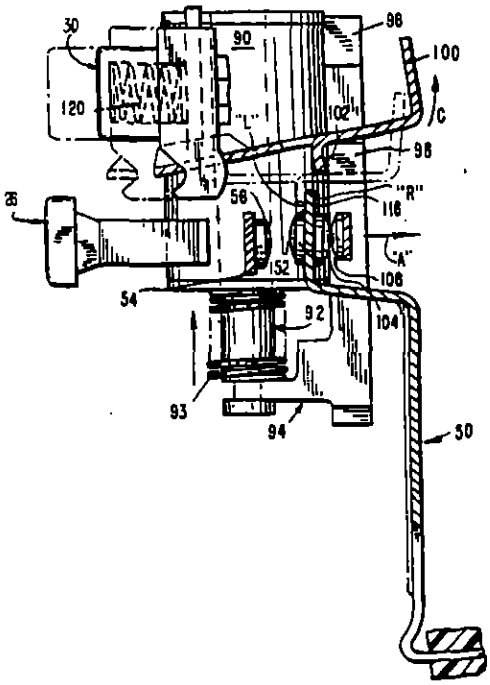
FIG. 7



After tripping, coil assembly 90 de-energizes, returning plunger 92 to its original extended position, returning banger 94 to its original position, and releasing latch member 100. Latch member 100 is now in a lockout position where latch finger 102 is on the left side of the end 116 of movable contact arm 50, inhibiting movable contact 52 from connecting to fixed contact 56. Electrical continuity cannot be reestablished until latch finger 102 is disengaged from the left side of contact arm 50.

To reset the GFCI receptacle and re-establish electrical connectivity, contacts 52 and 56 must be put in contact again. FIG. 8, below, shows how resetting connectivity is accomplished. Reset button 30 must be depressed sufficiently to overcome the bias force of return spring 120. Pushing reset button 30 causes latch member 100 to move to the right, which in turn forces latch finger 102, which is currently on the left side of the end 116 of movable contact arm 50, to push arm 50 to the right. This force on arm 50 causes reset contact 104 to close on reset contact 106, which activates the operation of the circuit interrupter by simulating a fault. The fault simulation energizes coil assembly 90, moving up plunger 92, banger 94, and banger dog 98. Banger dog 98 strikes latch member 100, which pivots upwards. Because latch member 100 is simultaneously moving up and to the right, it lifts latch finger 102 over end 116 of arm 50, so that latch finger 102 is now on the right side of end 116. Arm 50 returns to its unstressed position and coil assembly 90 de-energizes.

FIG. 8



De-energizing coil assembly 90 returns plunger 92, banger 94, and banger dog 98 to their original positions. Latch member 100 moves clockwise into a reset position. Release of the reset button causes latch member 100 and latch finger 102 to move to the left. Latch finger 102 forces movable contact arm 50 to the left until contact 52 electrically engages contact 56, reestablishing electrical connectivity. The circuit has now been reset.

2. Claim 3.

The '558 Patent sets forth four claims. Only Claim 3 is at issue here. Claim 3 states the following:

> 3. A circuit interrupting device comprising:
> housing means;
> first electrical conductive path means for conducting electricity within said housing means, and capable of electrically connecting to a source of electricity;
> second electrical conductive path means for conducting electricity within said

housing means, and capable of electrically connecting to at least one load when electrical continuity between said first and second electrical conductive path means is made;

third electrical conductive path means for conducting electricity within said housing means, and capable of electrically connecting to at least one user accessible load when electrical continuity between said first and third electrical conductive path means is made;

circuit interrupting means disposed within said housing means for breaking electrical continuity between said first and second conductive path means and between said first and third conductive path means, upon the occurrence of a predetermined condition; and

reset means disposed at least partially within said housing means for reestablishing electrical continuity between said first and second conductive path means and between said first and third conductive path means;

wherein said reset means comprises:

a reset button; and

reset contact means operatively associated with said reset button for activating said circuit interrupting means by causing said predetermined condition when said reset button is depressed.

The claim construction issues in the parties' briefs hinge on the construction of the following terms in Claim 3: circuit interrupting device, electrical conductive path means, circuit interrupting means, reset means, and reset contact means.

PROCEDURAL BACKGROUND

Leviton filed a Joint Claim Construction Statement on February 7, 2005, and the next day filed a Notice of Errata and of Substitution to replace its prior Joint Claim Construction Statement based on typographical errors and omissions in the first document. On February 18, 2005, the Defendants filed a revised Joint Claim Construction Statement. The parties subsequently filed the following briefs supporting their proposed claim construction: (i) Plaintiff Leviton's Memorandum on Claim Construction, filed February 25, 2005 (Doc. 107); (ii) Memorandum of Points and Authorities Supporting Defendants' Initial Claim Construction, filed February 25, 2005 (Doc. 108); (iii) Plaintiff Leviton's Response to Defendants' Memorandum on Claim Construction, filed March

15, 2005 (Doc. 109); (iv) Motion and Memorandum of Points and Authorities Further Supporting Defendants' Claim Construction, filed March 14, 2005 (Doc. 111); and (v) Plaintiff's Unopposed Motion [] For Leave to Exceed Page Limits with its attached Revised Exhibit 2, filed March 15, 2005 (Doc. 112).

On March 29, 2005, the Court held a hearing in which both parties presented detailed Power Point presentations explaining their positions. At the end of the hearing, the Court informed the parties that it was leaning towards Leviton's construction of the first, second, and third electrical conductive paths means, but that it was leaning toward the Defendants' construction of reset means, reset button, and reset contact means. The Court reserved comment on circuit interrupting means. The Court nevertheless notified counsel that these were mere leanings and that the Court intended to take all the issues under advisement to study the issues more. This written opinion follows the Court's careful consideration of the briefs, arguments made at the hearing, and the applicable law.

APPLICABLE PATENT LAW

The claims of a patent define the patented invention. See Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005); E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1433 (Fed. Cir. 1988). The claim defines the scope of the patent and "functions to forbid not only exact copies of an invention, but products that go to the heart of an invention but avoids the literal language of the claim by making a noncritical change." Markman v. Westview Instruments, Inc., 517 U.S. 370, 373-74 (1996)(internal citations and quotations omitted). Courts must construe claims as a matter of law. See Markman v. West View Instrument, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996).

In determining the meaning of claims, courts should first consider the following intrinsic

evidence: the claims, the specification, and the prosecution history. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996); Markman v. West View Instrument, Inc., 52 F.3d at 979. Courts should construe the words of the claims in light of their ordinary and customary meaning. See Phillips v. AWH Corp., 415 F.3d at 1312. The ordinary and customary meaning of claim terms should be interpreted from the perspective of a person of ordinary skill in the art at the time of the invention. See id. at 1313.

The words of the claim are the controlling focus. See Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed. Cir. 1998). Claims, however, must also be read in view of the specification. See Phillips v. AWH Corp., 415 F.3d at 1315. The United States Court of Appeals for the Federal Circuit has described the specification as "highly relevant to the claim construction analysis," usually "dispositive," and "*the single best guide to the meaning of a disputed term.*" Id. (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d at 1582). The specification may reveal a special definition of a claim term, an intentional disclaimer, or a term used to distinguish prior art. See Phillips v. AWH Corp., 415 F.3d at 1316; CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366-67 (Fed. Cir. 2002). Nevertheless, case law is clear that a patentee need not describe every conceivable and future embodiment of the invention in the specification. See CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1366. The last piece of intrinsic evidence -- the prosecution history -- consists of the complete record of the proceedings before the Patent and Trademark Office ("PTO") and includes prior art cited during the examination of the patent. See Phillips v. AWH Corp., 415 F.3d at 1317.

Courts may also consider extrinsic evidence, including expert testimony, dictionaries, and learned treatises, to explain scientific principles, the meaning of technical terms, and terms of art.

See Markman v. West View Instrument Inc., 52 F.3d at 980. This evidence is useful to demonstrate how those skilled in the art would interpret the claims. See id. at 979. Nevertheless, extrinsic evidence is "less significant than the intrinsic record in determining the legally operative meaning of claim language." Phillips v. AWH Corp., 415 F.3d at 1317 (internal quotations omitted). The Federal Circuit has cautioned courts not to place too much reliance on extrinsic evidence and too little reliance on intrinsic sources. See id. at 1320.

Despite this caution, the Federal Circuit has made clear that dictionaries can be a useful source to help in understanding the commonly understood meanings of words, and thus, a court may consult a dictionary at any time to help understand the definition of a word. See id. at 1322-24. Courts should not, however, elevate the dictionary meaning to such prominence that it shifts the focus of the inquiry "on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." Id. at 1321. Courts should instead generally focus "at the outset on how the patentee used the claim term in the claims, specification, and prosecution history, rather than starting with a broad definition and whittling it down." Id.[2]

---

[2] The Federal Circuit in Phillips v. AWH Corp. specifically rejected the opposite approach taken in the line of cases starting with Texas Digital Systems, Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002). As the Federal Circuit explained in Phillips v. AWH Corp.:

> [Texas Digital] suggested a methodology for claim interpretation in which the specification should be consulted only after a determination is made, whether based on a dictionary, treatise, or other source, as to the ordinary meaning or meanings of the claim term in dispute. . . . In effect, the Texas Digital approach limits the role of the specification in claim construction to serving as a check on the dictionary meaning of a claim term if the specification requires the court to conclude that fewer than all the dictionary definitions apply, or if the specification contains a sufficiently specific alternative definition or disavowal. . . . That approach, in our view, improperly restricts the role of the specification in claim construction.

Phillips v. AWH Corp., 415 F.3d at 1320. The Federal Circuit in Phillips v. AWH Corp. instead

Expert testimony can also be helpful to establish a term's meaning in the pertinent field. See id. at 1318. An expert's conclusory, unsupported assertions as to the meaning of a claim term, however, are not useful to a court. See id. at 1318. Courts should also only use extrinsic evidence, including expert testimony, to understand the patent, not to vary or contradict the terms of the claims. See Markman v. West View Instruments, Inc., 52 F.3d at 981. The Federal Circuit has cautioned courts about relying on expert testimony, which is generated at the time of litigation and is more prone to bias than intrinsic evidence. See Phillips v. AWH Corp., 415 F.3d at 1318.

"Section 112, ¶ 6 of title 35 of the United States Code allows patent applicants to claim an element of a combination functionally, without reciting structures for performing those functions." Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364 (Fed. Cir. 2000). Where a claim element contains the word "means" and recites a function, courts presume that the element is a means-plus-function element under 35 U.S.C. § 112, ¶ 6. Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d at 1364. 35 U.S.C. §112, ¶ 6 states:

> An element in a claim for a combination may be expressed by a means or step for performing a specified function without a recital of structure, material or acts in support thereof, and such claim can be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Nevertheless, a party can rebut that presumption by showing that the claim element recites sufficiently definite structure to perform entirely the specified function. See Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d at 1364; Sage Products, Inc. v. Devon Industries, Inc., 126 F.3d 1420, 1427-28 (Fed. Cir. 1997). To determine whether the claim recites sufficient structure, courts must consider whether the "term, as the name for structure, has a reasonably well understood meaning in

---

adhered to the approach it had taken in Markman v. West View Instruments, Inc., and Vitronics Corp. v. Conceptronic, Inc. See Phillips v. AWH Corp., 415 F.3d at 1324.

the art." Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996). A term does not need to connote a precise physical structure in order to rebut the § 112, ¶ 6 presumption. See CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1370; Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d at 1583.

If a court determines that the means-plus-function claim limitation applies, the court must then identify the function described in the limitation. See Linear Technology Corp. v. Impala Linear Corp., 379 F.3d 1311, 1322 (Fed. Cir. 2004). The court must then examine the written description to determine the structure that corresponds to the function. See id. Only structures from the specification that are necessary to perform the claimed function constitute corresponding structures. See Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364, 1369-70 (Fed. Cir. 2001). "The corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended." Id. at 1371.

ANALYSIS

The parties dispute the construction of seven claim terms: (1) "circuit interrupting device"; (2) "first electrical conductive path means"; (3) "second electrical conductive path means"; (4) "third electrical conductive path means"; (5) "circuit interrupting means"; (6) "reset means"; and (7) "reset contact means."

I. THE CLAIM TERM "CIRCUIT INTERRUPTING DEVICE" REFERS TO A DEVICE DESIGNED TO INTERRUPT OR BREAK THE FLOW OF CURRENT IN A SINGLE CIRCUIT.

The parties dispute the construction of the term "circuit interrupting device." Leviton contends that the term should be construed as a device designed to interrupt or break the flow of

current in one or more circuits. The Defendants argue the term should be interpreted as a device designed to interrupt or break the flow of current in a single circuit. The Court agrees with the Defendants' construction.

The elements of the claim suggest that the circuit interrupting device interrupts a single circuit with multiple paths. See '558 Patent, Col. 13, ll. 36-40 ("circuit interrupting means . . . breaking electrical continuity between said first and second conductive *path* means and between said first and third conductive *path* means") (emphasis added); id. at Col. 13, ll. 41-44 ("reset means . . . for reestablishing electrical continuity between said first and second conductive *path* means and between said first and third conductive *path* means") (emphasis added). That the claim term only refers to a single circuit finds further support in the abstract and written specification of the patent. In describing the resettable circuit interrupting device, the abstract states that the "trip portion operates independently of a circuit interrupting portion used *to break the electrical continuity in one or more conductive paths* in the device." Id., Abstract (emphasis added). This statement indicates that the device is designed to break multiple electrical paths but says nothing of breaking multiple circuits. The detailed description section of the patent also states that the "present application contemplates various types of circuit interrupting devices that are capable of *breaking at least one conductive path* at both a line side and a load side of the device." Id., Col. 4, ll. 58-61 (emphasis added). The specification also refers repeatedly to breaking electrical continuity in one or more conductive paths. See, e.g., '558 Patent, Col. 5, ll. 41-43; Col. 5, ll. 56-59; Col 7, ll. 31-35. Once again, the patent only describes breaking the flow of multiple *paths*, not multiple *circuits*.

Leviton nonetheless argues that the '558 patent discloses one or more circuits for the circuit interrupting device. Specifically, Leviton states that Figures 1 and 8 of the patent show at least two

circuits: "one circuit includes contacts 80 and 60, that is the user accessible load and a second circuit includes contacts 36 and 40, that are the load terminals." Pl.'s Resp. at 7 (Doc. 109). This interpretation of multiple circuits, however, contradicts the language in the specification referring to these portions of the circuit as paths. See, e.g., '558 Patent, Col. 5, ll. 34-37 ("The circuit interrupting and reset portions described herein preferably use electro-mechanical components to break (open) and make (close) one or more conductive paths between the line and load sides of the device."); Col. 6, ll. 12-15 ("The circuit interrupting portion . . . is used to break electrical continuity in one or more conductive paths between the line and load side of the device."); Col. 6, ll. 36-37 ("the conductive path between the line phase connection 34 and the load phase connection 36 includes . . .); Col. 6, ll. 46-48 ("The conductive path between the line phase connection 34 and the user accessible load phase connection includes. . ."). The patent does not refer to the portions of the device including contacts 80 and 60 and contacts 36 and 40 as comprising separate circuits. Rather, the patent language is consistent in referring to portions of the device including those contacts as comprising multiple paths.

Furthermore, the dictionary definition of "circuit" confirms this interpretation of "circuit interrupting device" as a device designed to break the flow of current in a circuit. Merriam Webster's Collegiate Dictionary 207 (10th ed. 1993) defines "circuit" as "the complete path of an electric current including usu. the source of electric energy." This definition contemplates a circuit as necessarily including an electrical power source in order to complete the electrical path. Claim 3 indicates that the circuit interrupting device is electrically connected to only one power source. See '558 Patent, Col. 13, ll. 23-25 ("first electrical conductive path means . . . capable of electrically connecting to a source of electricity"). The device thus contemplates breaking electrical continuity

of a single circuit with multiple paths. See id. and Col. 13, ll. 36-40 ("circuit interrupting means . . . breaking electrical continuity between said first and second conductive path means and between said first and third conductive path means").

The Court therefore holds that the correct construction of the term "circuit interrupting device" used in Claim 3 is a device designed to interrupt or break the flow of current in a single circuit.

II. THE CLAIM TERMS "CONDUCTIVE PATH" AND "CIRCUIT INTERRUPTING" ARE NOT SUBJECT TO 35 U.S.C. § 112, PARAGRAPH 6.

A. CONDUCTIVE PATH.

For the first, second, and third conductive path claim terms, the patent uses the word "means," followed by a recitation of function, resulting in the rebuttable presumption that the element is a means-plus function element subject to 35 U.S.C. § 112, ¶ 6. Leviton, thus, has the burden of overcoming the presumption by showing that the claim element recites sufficiently definite structure to perform the specified function. See Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d at 1364.

The Court finds that Leviton has met its burden because the term "conductive path" connotes sufficient structure, especially when coupled with the surrounding terms that provide location and formation descriptions. In determining whether a term itself is a structural term as understood in the art, courts frequently examine dictionary definitions. See Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1360 (Fed. Cir. 2004) ("[W]e have looked to the dictionary to determine if a disputed term has achieved recognition as a noun denoting structure, even if the noun is derived from the function performed."); Linear Technology Corp. v. Impala Linear Corp., 379

F.3d at 1320 (consulting technical dictionary to determine whether "circuit" connotes structure); Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d at 1365 (referring to dictionary definition of word "baffle" to determine whether it is structural term). Merriam Webster's Collegiate Dictionary 241 (10th ed. 1993) defines "conductor" as "a material or object that permits an electric current to flow easily." Because the term "conductor" – a material or object – imparts structure, the Court finds that a person with ordinary skill in the field would understand that the related term "conductive path" also imparts structure. Cf. Linear Technology Corp. v. Impala Linear Corp., 379 F.3d at 1320 (holding that term "circuit" connotes structure).

Furthermore, the contextual claim language describes the particular structure for each conductive path. In particular, each element provides further location and formation detail apart from the function itself. The "first electrical conductive path means" element, after describing its function as "conducting electricity," further states that it must be "capable of electrically connecting to a source of electricity." This statement provides a location and formation for the conductive path, which is more than just a general description of any structure that will perform a particular function.[3] Cf. Phillips v. AWH Corp., 415 F.3d at 1311 (holding that term "baffles" is structural because claim characterizes baffles as "extend[ing] inwardly" from steel shell walls); Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed. Cir. 1996) (holding that claim which described not only the structure (perforations) but also its location (extending from leg band to waist band) and extent (extending through outer impermeable layer) recites too detailed a structure to constitute a means-plus-function element); MediaCom Corp. v. Rates Technology, Inc., 4 F.Supp.2d 17, 27 (D. Mass. 1998) (holding

[3] The Court disagrees with the Defendants' interpretation that this phrase describes further function, rather than structure.

that "switch means operatively connected to said first jack means for disconnecting said first telephone from said network" was not a § 112, ¶ 6 means-plus-function statement because it describes structure that supports disconnecting function (*i.e.* a switch or switches) and describes it as connected to adjacent structure, the first jack). Similarly, the second electrical conductive path describes additional location and formation detail when it states that it is "capable of electrically connecting to at least one load when electrical continuity between said first and second electrical conductive path means is made." The third electrical conductive path also provides additional structure: "capable of electrically connecting to at least one user accessible load when electrical continuity between said first and third electrical conductive path means is made."

Leviton's expert, Dr. Jaime De La Ree, also confirmed that a person of ordinary skill in the field would understand that the term "conductive path" connotes structure, especially in light of the contextual language following the term. That the terms may not connote a precise physical structure does not compel a finding of insufficient structure. See CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1370; Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d at 1583. For this reason, the Court declines to adopt the opinion of Defendants' expert, Dr. John Choma, who opined that the term "electrical conductive path" can only impart sufficient structure if the claim contains a delineation of the material used in the conductive path or a description of the geometry, shape, size, or conductive quality of the path. The case law indicates that such a precise physical structure is not required to find sufficient structure. See id. The Court also declines to adopt Dr. Choma's opinion that the term "electrical conductive path" conveys only a schematic depiction of a hard-wired connection between two arbitrary points, A and B. His opinion does not take into account the language following the term "conductive path," which conveys location information as to the

connecting points for the conductive path. For example, the term "first electrical conductive path" imparts more than just a connection between two arbitrary points; rather, it imparts a hard wired connection (structure) to a source of electricity. Finally, the Court notes that Dr. Choma's opinion actually supports its finding that the term "conductive path" connotes structure, because a hard-wired connection between points imparts structure.

The Defendants primarily rely on two distinguishable cases in support of their position: Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533 (Fed. Cir. 1991), and Unidynamics Corp. v. Automatic Prods. Int'l. Ltd., 157 F.3d 1311 (Fed. Cir. 1998). In Laitram Corp. v. Rexnord, Inc., the Federal Circuit held that the claim language "means for joining said pluralities to one another so that the axes of said holes of said first plurality are arranged coaxially . . ." was a means-plus-function element. 939 F.2d at 1535-36. That case is inapposite because, unlike here, the claim did not provide a specific structure for what the "means" was. In this case, the claim states a structure before the term "means," for example, "first electrical conductive path means." The term "conductive path" has a structural meaning to those skilled in the art of GFCI devices, as evidenced by its dictionary definition and by the expert opinions of both Dr. De La Ree and Dr. Choma. Furthermore, use of the term "conductive path" coupled with the additional structural language in the claim sufficiently tells a person skilled in the art what it is structurally. "Conductive path means" conveys far more structure than simply "means," and therefore, the case of Laitram Corp. v. Rexnord, Inc. is not controlling.

Unidynamics Corp. v. Automatic Prods. Int'l. Ltd. is likewise distinguishable. In that case, the Federal Circuit held that the claim phrase "spring means tending to keep the door closed" is a means-plus-function element. See 157 F.3d at 1319. In doing so, it distinguished Cole v. Kimberly

Clark Corp. by reasoning that in that case the claim term not only described sufficient structure (perforations) but also described the location and extent of the structure. See Unidynamics Corp. v. Automatic Prods. Int'l. Ltd., 157 F.3d at 1319. In contrast, in Unidynamics Corp. v. Automatic Prods. Int'l. Ltd., "spring" was the only recitation of structure, which the court found insufficient. See id. The claim phrase in this case, by contrast, not only describes sufficient structure ("conductive path"), it also describes the location and formation of the structure (*e.g.*, "capable of electrically connecting to a source of electricity"). The holding in Unidynamics Corp. v. Automatic Prods. Int'l. Ltd. is therefore also inapplicable to this case.[4]

For all the above reasons, the Court concludes that the terms "first electrical conductive path," "second electrical conductive path," and "third electrical conductive path" are not subject to

---

[4] The Defendants also cite a number of other cases in support of their position: Sage Products, Inc. v. Devon Industries, Inc., 126 F.3d 1420 (Fed. Cir. 1997); Sule v. Klochn Co., 149 F.Supp.2d 115 (D.N.J. 2001); Nilssen v. Motorola, Inc., 80 F.Supp.2d 921 (N.D. Ill. 2000); and Fairchild Semiconductor Corp. v. Nintendo Co., 30 U.S.P.Q.2d 1657 (W.D. Wash. 1994) (unpublished opinion). The Court finds these cases similarly distinguishable for the following reasons: the terms "conductive path" and "circuit interrupter" impart sufficient structure, as evidenced by their ordinary definitions and by the expert opinions of Dr. De La Ree and Dr. Choma, and the language following the terms imparts additional location information that adds structural detail. The combination of these factors distinguishes the elements at issue in Claim 3 from those in the cases cited by the Defendants.

The Court additionally finds the case of Leviton Manufacturing Co., Inc. v. Universal Security Instruments, Inc., 2005 WL 936990 (D.Md. April 22, 2005)(unpublished opinion). distinguishable. That case not only involves different claims (Claims 1, 2, and 4) of the '558 patent, but also different terms. See id. at *13-14. Moreover, in that case, Leviton's own expert stated that the term "reset lock-out" had no standard meaning in the art and that he had never used the term before his work in that litigation. See id. at *28. Leviton also produced no evidence to demonstrate that "reset mechanism" has a well understood meaning as structure to a person of ordinary skill in the art. See id. at *36. The expert opinions in this case are in stark contrast: both experts acknowledge that the terms "conductor" and "circuit interrupter" impart structure. The expert opinions in this case in combination with the dictionary definitions set the elements at issue in Claim 3 apart from the elements in Leviton Manufacturing Co., Inc. v. Universal Security Instruments, Inc.

35 U.S.C. § 112, ¶ 6. The Court will thus construe these terms using standard claim construction rules, as set forth in Leviton's Claim Construction chart.

B. CIRCUIT INTERRUPTING.

In Claim 3, the term "circuit interrupting" also uses the word "means," followed by a recitation of function, resulting in the rebuttable presumption that the element is a means-plus-function element subject to 35 U.S.C. § 112, ¶ 6. The Court finds that Leviton has again met its burden of showing that the claim recites sufficient structure to perform the claimed function.

First, the term "circuit interrupting" connotes structure. Merriam Webster's Collegiate Dictionary 612 (10th ed. 1993) defines the term "interrupter" as "a device for interrupting an electric current usu. automatically." The Court therefore finds that a person of ordinary skill in the art would understand that the term "circuit interrupting" -- a device -- is a structural term. See Linear Technology Corp. v. Impala Linear Corp., 379 F.3d at 1320. The contextual language of Claim 3 also provides further information regarding the location of the structure, *i.e.*, "between said first and second conductive path means and between said first and third conductive path means." '558 Patent, Col. 13, ll. 37-39. Finally, Leviton's expert, Dr. De La Ree, affirmed that "circuit interrupting" is a structural term well-known and understood by persons of ordinary skill in the art. Dr. De La Ree's opinion was not merely conclusory, as he relied on technical literature and previous patents, which demonstrated that a circuit interrupter is a structural device. Furthermore, the Defendants' expert, Dr. Choma, indicated that the term "circuit interrupting" conveys structure when he stated, "the structure conveyed is little more than the schematic depiction of a controlled switch." Dr. John Choma's Expert Response to Declaration of Dr. J. De La Ree at 10. Again, that the term may not connote a precise physical structure does not compel a finding of insufficient structure. See CCS

Fitness, Inc. v. Brunswick Corp., 288 F.3d at 1370; Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d at 1583. See also Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d at 1359-60 ("[I]t is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function.").

Consequently, the Court concludes that the term "circuit interrupting means" is not subject to the claims limitations in 35 U.S.C. § 112, ¶ 6. The Court will construe the term "circuit interrupting" using standard claim construction rules as set forth in Leviton's Claim Construction chart.

III. RESET AND RESET CONTACT MEANS FUNCTION AND STRUCTURE.

Claim 3 sets forth two sub-elements comprising "reset means": a reset button and reset contact means. As represented to the Court at the Markman hearing, the parties agree that the terms "reset means" and "reset contact means" are subject to the claims limitation in 35 U.S.C. § 112, ¶ 6. The parties disagree, however, about what the function and corresponding structures are for "reset means" and "reset contact means."

As for the function of "reset means," Leviton contends that the function is to reestablish electrical continuity between the first and second conductive paths and between the first and third conductive paths. Leviton argues that the corresponding structure is the reset button and reset contact means. Leviton, in turn, asserts that the function of "reset contact means" is activating the circuit interrupting means by causing the predetermined condition when the reset button is depressed. Leviton limits the corresponding structure of the reset contact means to arm 50, latch finger 102, and reset contacts 104 and 106.

The Defendants argue that Leviton too narrowly restricts the function of "reset means." The Defendants assert that the full function of "reset means" is to reestablish electrical continuity between the first and second conductive paths and between the first and third conductive paths *by closing a circuit that causes the circuit interrupter to activate*. The Defendants contend that the following structures correspond to this function: contact arms 50, 70; movable contacts 52, 82; contact arms 54, 74; fixed contacts 56, 76; reset contacts 104 and 106; coil assembly 90, plunger 92, banger dogs 96 and 98; latch member 100; latching finger 102; reset button 30; operable ends 116 and 118; and a circuit that senses the "predetermined condition" and causes coil assembly 90 to actuate plunger 92. As to the function of "reset contact means," the Defendants agree with Leviton's statement of the function but disagree with the structure. The Defendants assert that the following structures comprise "reset contact means": latch member 100; latching finger 102; reset button 30; reset contacts 104 and 106; coil assembly 90, plunger 92, banger dogs 96 and 98; and a circuit that senses the "predetermined condition" and causes coil assembly 90 to actuate plunger 92.

The Court agrees with Leviton's interpretation of the function of "reset means": reestablishing electrical continuity between the first and second conductive path means and between the first and third conductive path means, as this is the language used in Claim 3. Claim 3 does not include the phrase "by closing a circuit that causes the circuit interrupter to activate," and thus, the Court declines to add this phrase to the function of "reset means."[5] As for the corresponding

[5] Moreover, the Defendants' addition is not consistent with the written specification. The specification states that closing reset *contacts* 104 and 106 causes the circuit interrupter to activate. See '558 Patent, Col. 8, ll. 35-36. Activation of the circuit interrupter in turn causes the circuit to close by reestablishing connectivity between contacts 52 and 56, which resets the device. The circuit does not close until contacts 52 and 56 (and contacts 62 and 66, as well as the mirror image contacts in the neutral path) close. If the Defendants meant that closing contacts 104 and 106 closes a separate circuit that activates the circuit interrupter, this interpretation would be inconsistent with

structure of "reset means," the claim itself states that "reset means" comprises "a reset button" and "reset contact means." '558 Patent, Col. 13, ll. 45-47. Leviton would thus have the Court find that this claim language limits the structure of "reset means" to the reset button and the structures necessary to carry out the "reset contact means" function. Leviton asserts that, because the parties agree on the function of "reset contact means," the only issue is what structures are required to carry out the agreed upon "reset contact means" function. The Court will thus begin with the structure that comprises "reset contact means."

The Court finds that the following structures are necessary to execute the "reset contact means" function, *i.e.*, to activate the circuit interrupting means by causing the predetermined condition: latch member 100, latching finger 102, movable contact arm 50, and reset contacts 104 and 106.[6] The Defendants assert that coil assembly 90, plunger 92, banger dogs 96 and 98, and the circuit that senses the predetermined condition should also be included. These structures, however, do not correspond to the function. The function of "reset contact means" is to activate the circuit interrupting means. As set forth in the written specification, "[c]losing the reset contacts [104 and 106] activates the operation of the circuit interrupter by, for example simulating a fault." '558 Patent, Col. 8, ll. 35-37. According to the specification, the structures that close reset contacts 104 and 106 are latch member 100, latching finger 102, and movable contact arm 50. See id., Col. 8, ll.

---

the Defendants' assertion that there is but one circuit, albeit multiple paths, in the device. Thus, based on the specification, it would be more consistent to have the addition to the "reset means" function state one of the following: "by closing contacts that cause the circuit interrupter to activate" or "by activating the circuit interrupter that causes the circuit to close."

[6] The Court agrees with the Defendants that latch member 100 is a necessary structure to complete the function of "reset contact means," because latch member 100 is the connecting structure between the reset button and latch finger 102. The Court also would include any mirror image structures in the neutral conductive path.

25-35. Because the function of "reset contact means" is merely to *activate* the circuit interrupting means and not to actually interrupt the circuit, the structures that comprise the circuit interrupter are not necessary to complete that function. The Court therefore finds that coil assembly 90, plunger 92, and banger dogs 96 and 98 are not "reset contact means" structures. Similarly, the circuit that senses the predetermined condition should not be included, because that structure merely *senses* the predetermined condition, *e.g.*, the fault, it does not *cause* the predetermined condition, to which the function is limited. As set forth in the specification, closing the reset contacts is what causes the predetermined condition, and therefore, only the structures that close the reset contacts are necessary to execute the function of activating the circuit interrupting means by causing the predetermined condition.

Nevertheless, this finding does not end the inquiry, because the reset button coupled with the structures comprising the "reset contact means" are insufficient to completely execute the "reset means" function of reestablishing electrical continuity between said first and second conductive path means and between said first and third conductive path means. The "reset contact means" structures merely activate the circuit interrupting means; they do not reestablish electrical continuity. The Court thus agrees with the Defendants that further structures are required to fully complete this function. The Court finds that the following additional structures are necessary to fully execute the "reset means" function: return spring 120; reset contacts 52, 62, 56, 66, 72, 82, 76, and 86; coil assembly 90, plunger 92, banger 94, banger dogs 96 and 98; operable ends 116 and 118; and a circuit that senses the "predetermined condition" and causes coil assembly 90 to actuate plunger 92.[7]

[7] The Court disagrees with the Defendants that contact arms 54 and 74 are necessary structures; rather, the Court finds that they are enabling structures, and thus, not part of the "reset means" structure. The Court also notes that it has included banger 94 and contacts 62, 66, 72 and

In sum, all the necessary structures corresponding to the "reset means" function are as follows: reset button 30; return spring 120; latch member 100; latching finger 102; movable contact arms 50, 70; reset contacts 104, 106, 52, 62, 56, 66, 72, 82, 76, and 86; coil assembly 90, plunger 92, banger 94, banger dogs 96 and 98; operable ends 116 and 118; and a circuit that senses the "predetermined condition" and causes coil assembly 90 to actuate plunger 92. See '558 Patent, Col. 8, ll. 25-56.

CONCLUSION

IT IS THEREFORE ORDERED, for the reasons stated herein, that the case proceed on the basis of the above constructions of Claim 3 in the '558 patent.

UNITED STATES DISTRICT JUDGE

86, which were omitted from Defendants' interpretation in the Joint Claims Construction Statement. The Court finds that reestablishing electrical connectivity in the phase conductive path uses contact arm 50, contacts 52 and 56 (connecting line phase and load phase connections), and contacts 62 and 66 (connecting line phase and user accessible load phase connections). See '558 Patent, Col. 6, ll. 36-52. Reestablishing electrical continuity in the mirror image neutral conductive path uses contact arm 70, contacts 72 and 76 (connecting line neutral and load neutral connections), and contacts 82 and 86 (connecting line neutral and user accessible load neutral connections). See id., Col. 6, ll. 53-67, Col. 7, ll. 1-2.

Counsel:

R.E. Thompson
Jason T. Gaskill
Modrall, Sperling, Roehl Harris & Sisk, PA
Albuquerque, New Mexico

-- and --

Paul J. Sutton
Michael A. Nicodema
Joseph M. Manak
Barry J. Schindler
Barry G. Magidoff
Joseph G. Lee
Greenberg Traurig, LLP
New York, New York

Attorneys for Plaintiff Leviton Manufacturing Company, Inc.

Alberto A. Leon
Bauman, Dow & Leon, P.C.
Albuquerque, New Mexico

Attorneys for Defendant Nicor, Inc. d/b/a Nicor Lighting and Fans

DeWitt M. Morgan
Rodey Dickason Sloan Akin & Robb, P.A.
Albuquerque, New Mexico

-- and --

Anthony F. LoCicero
Mark J. Rosenberg
Amster Rothstein & Ebenstein LLP
New York, New York

Attorneys for Defendant Harbor Freight Tools USA, Inc.

J. Douglas Foster
Foster Johnson McDonald Lucero Koinis
Albuquerque, New Mexico

-- and --

Bryan G. Harrison
Morris, Manning & Martin, LLP
Atlanta, Georgia

Attorneys for Defendant/Intervenor Zhjiang Dongzheng Electrical Co.